HISTORY OF LIFE

**Read the passage below, which covers topics from your textbook.**

**Answer the questions that follow.**

Methods of establishing the age of materials include the technique

known as **radioactive dating.** Recall that the atomic number of an

element is the number of protons in the nucleus. All atoms of an

element have the same atomic number, but their number of neutrons

can vary. Atoms of the same element that differ in the number

of neutrons they contain are called **isotopes.**

Some isotopes have unstable nuclei, which tend to undergo **radioactive**

**decay;** that is, their nuclei tend to release particles, radiant

energy, or both. Such isotopes are called **radioactive isotopes.**

Rates of decay of radioactive isotopes have been determined for

many isotopes. The length of time it takes for one-half of any size

sample of an isotope to decay is called its **half-life.**

**Read each question and write your answer in the space provided.**

**Identifying Main Ideas**

**One reading skill is the ability to identify the main idea of a passage. Frequently a main idea is accompanied by supporting information that offers detailed facts about the main idea.**

**1.** What is radioactive dating?\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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**2.** What causes an isotope to undergo radioactive decay? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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**3.** What does *half-life* refer to?\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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**Circle the letter of the word or phrase that best completes the sentence.**

**4.** Isotopes undergoing radioactive decay may release

**a.** radiant energy.

**b.** particles.

**c.** carbon.

**d.** Both (a) and (b)

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